

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An isolated polynucleotide encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO: 1;

(2) a nucleic acid sequence as shown in SEQ ID NO: 2;

(3) a nucleic acid sequence that has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2, and encodes ~~an amino acid sequence~~ a polypeptide that binds PSD-95 (postsynaptic density-95); and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 under stringent conditions of 2x SSC, 0.1% SDS, 50°C or 1x SSC, 0.1% SDS, 37°C.

2. (Previously presented) A vector comprising the polynucleotide of claim 1 or 10.

3. (Previously presented) A host cell comprising the polynucleotide of claim 1 or 10.

4. (Previously presented) A method for producing a mammalian Prickle protein encoded by the polynucleotide of claim 1, wherein the method comprises the steps of culturing the host cell comprising the polynucleotide of claim 1, and recovering an expressed protein from said host cell or the culture supernatant thereof.

5. (Currently amended) A purified fragment of a polypeptide encoded by a polynucleotide encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO:1;

(2) a nucleic acid sequence as shown in SEQ ID NO: 2;

(3) a nucleic acid sequence that has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2, and encodes ~~an amino acid sequence~~ a polypeptide that binds PSD-95 (postsynaptic density-95); and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 under stringent conditions of 2x SSC, 0.1% SDS, 50°C or 1x SSC, 0.1% SDS, 37°C,

wherein the fragment comprises at least eight amino acid residues and a PET (Prickle Espinas Testin) domain.

6. (Canceled).

7. (Currently amended) An isolated nucleotide chain that encodes a polypeptide fragment of a polypeptide encoded by a polynucleotide encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO:1;

(2) a nucleic acid sequence as shown in SEQ ID NO: 2;

(3) a nucleic acid sequence that has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2, and encodes ~~an amino acid sequence~~ a polypeptide that binds PSD-95 (postsynaptic density-95); and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 under stringent conditions of 2x SSC, 0.1% SDS, 50°C or 1x SSC, 0.1% SDS, 37°C,

wherein the fragment comprises at least eight amino acid residues and a PET (Prickle Espinas Testin) domain.

8. (Previously presented) A host cell comprising the vector of claim 2.

9. (Canceled).

10. (Currently amended) An isolated polynucleotide comprising a complementary sequence of ~~the~~ a polynucleotide of claim 1 encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO:1;

(2) a nucleic acid sequence as shown in SEQ ID NO:2;

(3) a nucleic acid sequence that has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2 and encodes a polypeptide that binds PSD-95 (postsynaptic density-95); and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 under stringent conditions of 2X SSC, 0.1% SDS, 50°C or 1x SSC, 0.1%SDS, 37°C.

11. (Previously presented) The polynucleotide of claim 1, wherein the polynucleotide comprises a nucleic acid sequence that has at least 99% identity with a nucleotide sequence comprising the nucleotide sequence of SEQ ID NO:2.

12. (Currently amended) The polynucleotide of claim 1, wherein the polynucleotide comprises a nucleic acid sequence that encodes a PET (Prickle Espinas Testin) domain and a LIM (Lin-11, Isl-1, Mec-3) domain.

13. (Previously presented) The polynucleotide of claim 12, wherein the PET domain corresponds to position 19-89 and the LIM domains correspond to positions 130-186, 195-246, and 254-310 of the amino acid sequence of SEQ ID NO:1.

14. (New) The fragment of claim 5, wherein the PET domain corresponds to position 19-89 of the amino acid sequence of SEQ ID NO:1.

15. (New) The nucleotide chain of claim 7, wherein the PET domain corresponds to position 19-89 of the amino acid sequence of SEQ ID NO:1.